

Operation

$$X_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Quadratic Formula

QUAD

Use

a) Calling Linkage

L :	100	8	L+2	3ff	3sf
L + 1:	/	5	/	/	QUAD: 1
L + 2:	0	SQR: 1	32[3x _r [β

b) Adaptation Link Word

L + 2: 02a JWL 02d B

c) Storage

j = 42 words

k = 42 orders

0 constants

6 opstos: 35a to 35f (shared with SQR)

Requirements and Performance

a) Method of operation Floating point ; algebraic solution

b) Additional routines required SQR

c) Range and form of variable a, b, c normalized & stored in sequential locations -

d) Accuracy x_{r1}, x_{j1}; x_{r2}, x_{j2} stored sequentially.
x_{j1} = x_{j2} = 0 for "real" answers.

e) Performance time ~ 1.75 sec (inc. SQR)

Note: if a = 0, routine halts (026) - if "RUN" is pushed x_{j1} = x_{j2} = 0 ; x_{r1} = x_{r2} = - $\frac{c}{b}$